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**TABLE 4 TO PART 455—BAT AND NSPS EFFLUENT LIMITATIONS FOR PRIORITY POLLUTANTS FOR DIRECT DISCHARGE POINT SOURCES THAT USE END-OF-PIPE BIOLOGICAL TREATMENT**

[Micrograms per liter (µg/l)]		
Pollutant	Daily maximum shall not exceed	Monthly average shall not exceed
1,1-Dichloroethylene .....	25	16
1,1,1-Trichloroethane .....	54	21
1,2-Dichloroethane .....	211	68
1,2-Dichloropropane .....	230	153
1,2-Dichlorobenzene .....	163	77
1,2-trans-Dichloroethylene .....	54	21
1,3-Dichloropropene .....	44	29
1,4-Dichlorobenzene .....	28	15
2-chlorophenol .....	98	31
2,4-Dichlorophenol .....	112	39
2,4-Dimethylphenol .....	36	18
Benzene .....	136	37
Bromodichloromethane .....	380	142
Bromomethane .....	380	142
Chlorobenzene .....	28	15
Chloromethane .....	190	86
Cyanide (Total) .....	640	220
Dibromochloromethane .....	794	196
Dichloromethane .....	89	40
Ethylbenzene .....	108	32
Lead (Total) .....	690	320
Naphthalene .....	59	22
Phenol .....	26	15
Tetrachloroethylene .....	56	22
Tetrachloromethane .....	38	18
Toluene .....	80	26
Tribromomethane .....	794	196
Trichloromethane .....	46	21

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**TABLE 5 TO PART 455—BAT AND NSPS EFFLUENT LIMITATIONS FOR PRIORITY POLLUTANTS FOR DIRECT DISCHARGE POINT SOURCES THAT DO NOT USE END-OF-PIPE BIOLOGICAL TREATMENT**

[Micrograms per liter (µg/l)]		
Pollutant	Daily maximum shall not exceed	Monthly average shall not exceed
1,1-Dichloroethylene .....	60	22
1,1,1-Trichloroethane .....	59	22
1,2-trans-Dichloroethylene .....	66	25
1,2-Dichlorobenzene .....	794	196
1,2-Dichloropropane .....	794	196
1,2-Dichloroethane .....	574	180
1,3-Dichloropropene .....	794	196
1,4-Dichlorobenzene .....	380	142
2,4-Dimethylphenol .....	47	19
Benzene .....	134	57
Bromodichloromethane .....	380	142
Bromomethane .....	380	142
Chlorobenzene .....	380	142
Chloromethane .....	295	110
Cyanide (Total) .....	640	220
Dibromochloromethane .....	794	196

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[Micrograms per liter (µg/l)]		
Pollutant	Daily maximum shall not exceed	Monthly average shall not exceed
Dichloromethane .....	170	36
Ethylbenzene .....	380	142
Lead (Total) .....	690	320
Naphthalene .....	47	19
Phenol .....	47	19
Tetrachloroethylene .....	164	52
Tetrachloromethane .....	380	142
Toluene .....	74	28
Tribromomethane .....	794	196
Trichloromethane .....	325	111

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**TABLE 6 TO PART 455—PSES AND PSNS FOR PRIORITY POLLUTANTS**

[Micrograms per liter (µg/l)]		
Pollutant	Daily maximum shall not exceed	Monthly maximum shall not exceed
1,1-Dichloroethylene .....	60	22
1,1,1-Trichloroethane .....	59	22
1,2-trans-Dichloroethylene .....	66	25
1,2-Dichlorobenzene .....	794	196
1,2-Dichloropropane .....	794	196
1,2-Dichloroethane .....	574	180
1,3-Dichloropropene .....	794	196
1,4-Dichlorobenzene .....	380	142
Benzene .....	134	57
Bromodichloromethane .....	380	142
Bromomethane .....	380	142
Chlorobenzene .....	380	142
Chloromethane .....	295	110
Cyanide (Total) .....	640	220
Dibromochloromethane .....	794	196
Dichloromethane .....	170	36
Ethylbenzene .....	380	142
Lead (Total) .....	690	320
Naphthalene .....	47	19
Tetrachloroethylene .....	164	52
Tetrachloromethane .....	380	142
Toluene .....	74	28
Tribromomethane .....	794	196
Trichloromethane .....	325	111

[58 FR 50699, Sept. 28, 1993]

**TABLE 7 TO PART 455 [RESERVED]**

**TABLE 8 TO PART 455—LIST OF POLLUTION PREVENTION ALTERNATIVE PRACTICES**

A modification to the list of practices on this table that an individual facility must comply with to be eligible for the pollution prevention alternative is allowed with acceptable justification as listed on this table as approved by the permit writer or control authority (using BPJ/BEJ) after submittal by the facility of a request for modification. A modification, for purposes of this table, means that a facility would no longer have

to perform a listed practice or would need to comply with a modified practice. However, the modification only applies to the specific practice for which the modification has been justified and to no other listed practices. Facilities are required to thoroughly discuss all modifications in the on-site compliance paperwork as described above in the limitations and standards (§455.41(c)).

1. Must use water conservation practices. These practices may include, but are not limited to using: spray nozzles or flow reduction devices on hoses, low volume/high pressure rinsing equipment, floor scrubbing machines, mop(s) and bucket(s), and counter current staged drum rinsing stations.

[Modification allowed when: Rinsing narrow transfer lines or piping where sufficient rinsing is better achieved by flushing with water.]

2. Must practice good housekeeping:

(a) Perform preventative maintenance on all valves and fittings and repair leaky valves and fittings in a timely manner;

(b) Use drip pans under any valves or fittings where hoses or lines are routinely connected and disconnected, collect for reuse when possible; and

(c) Perform quick cleanup of leaks and spills in outdoor bulk storage or process areas.

3. Must sweep or vacuum dry production areas prior to rinsing with water.

4. Must clean interiors of dry formulation equipment with dry carrier prior to any water rinse. The carrier material must be stored and reused in future formulation of the same or compatible product or properly disposed of as solid waste.

5. If operating continuous overflow Department of Transportation (DOT) aerosol leak test baths—>

Must operate with some recirculation.

6. If operating air pollution control wet scrubbers—>

Must operate as recirculating scrubbers (periodic blowdown is allowed as needed).

[Modification allowed when: Facility demonstrates that they would not be able to meet Resource Conservation Recovery Act or Clean Air Act (CAA) requirements.]

7. When performing rinsing of raw material drums, storage drums, and/or shipping containers that contained liquid PAI(s) and/or inert ingredients for the formulation of water-based products—>

Must reuse the drum/shipping container rinsate DIRECTLY into the formulation at the time of formulation; or store for use in future formulation of same or compatible product; or use a staged drum rinsing station (counter current rinsing).

[Modification allowed when: the drum/shipping container holds inert ingredient(s) only and (1) the facility can demonstrate that, after using water conservation practices, the large concentration of inert ingredient in the

formulation creates more volume than could feasibly be reused; or (2) the facility can demonstrate that the concentration of the inert in the formulation is so small that the reuse would cause a formulation to exceed the ranges allowed in the Confidential Statement of Formula (CSF) (40 CFR 158.155).]

8. When performing rinsing of raw material drums, storage drums, and/or shipping containers that contained liquid PAI(s) and/or inert ingredients for the formulation of solvent-based products—>

Must reuse the drum/shipping container rinsate DIRECTLY into the formulation at the time of formulation or store for use in future formulation of same or compatible product.

[Modification allowed when:

(a) The drum/shipping container holds inert ingredient(s) only and: (1) The facility can demonstrate that, after using water conservation practices, the large concentration of inert ingredient in the formulation creates more volume than could feasibly be reused; or (2) the facility can demonstrate that the concentration of the inert in the formulation is so small that the reuse would cause a formulation to exceed the ranges allowed in the Confidential Statement of Formula (CSF) (40 CFR 158.155); or

(b) Drums/shipping containers are going to a drum refurbisher/recycler who will only accept drums rinsed with water.]

9. Must dedicate PFPR production equipment by water-based versus solvent-based products. Dedicated solvent-based or water-based equipment may be used on a non-routine basis for non-dedicated operations; however the facility may not discharge the solvent/aqueous changeover rinsate as part of their P2 allowable discharge (*i.e.*, the facility must achieve zero discharge of those process wastewater pollutants).

[Modification allowed when: Facility has installed and is using a solvent recovery system for the changeover rinsate (can also be used for other solvent recovery).]

10. Must store the rinsate from interior rinsing (does not include drum/shipping container rinsate) for reuse in future formulation of same or compatible product.

[Modification allowed when:

(a) Facility has evidence of biological growth or other product deterioration over a typical storage period;

(b) Facility has space limitations, BUT must still store rinsates for most frequently produced products;

(c) Manufacturer (or formulator contracting for toll formulating) has directed otherwise (*i.e.*, send back to them or send for off-site disposal);

(d) Facility is dropping registration or production of the formulation and there is no compatible formulation for reuse of the rinsates or facility can provide reasonable

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explanation of why it does not anticipate formulation of same or compatible formulation within the next 12 months;

(e) Facility only performs packaging of the pesticide product from which interior rinsate is generated; or

(f) Facility has demonstrated that it must use a detergent to clean the equipment.]

**NOTES**

*For indirect dischargers:* After following the practices above, some wastewaters may require pretreatment prior to discharge to POTWs. See definition of pollution prevention allowable discharge for indirect dischargers (§ 455.41(d)).

*For direct dischargers:* After following the practices above, all wastewaters require treatment prior to discharge directly to the nation's waters. See definition of pollution prevention allowable discharge for direct dischargers (§ 455.41(e)).

*Additional information and guidance* on implementing these P2 practices as well as evaluating compliance with these practices will be available in a P2 Guidance Manual for the PFPR Industry.

[61 FR 57553, Nov. 6, 1996]

**TABLE 9 TO PART 455—GROUP 2 MIXTURES**

Shaughnessey code	Chemical name <sup>1</sup>
002201 .....	Sabadilla alkaloids.
006501 .....	Aromatic petroleum derivative solvent.
006602 .....	Heavy aromatic naphtha.
016601 <sup>2</sup> .....	Dry ice.
022003 .....	Coal tar.
025001 .....	Coal tar neutral oils.
025003 .....	Creosote oil (Note: Derived from any source).
025004 .....	Coal tar creosote.
031801 .....	Ammonium salts of C8–18 and C18' fatty acids.
055601 .....	BNOA.
063501 .....	Kerosene.
063502 .....	Mineral oil—includes paraffin oil from 063503.
063503 .....	Petroleum distillate, oils, solvent, or hydrocarbons; also p.
063506 .....	Mineral spirits.
067003 .....	Terpineols (unspec.).
067205 .....	Pine tar oil.
067207 .....	Ester gum.
067302 .....	Amines, N-coco alkyltrimethylenedi-, acetates.
069152 .....	Amines, coco alkyl, hydrochlorides.
070801 .....	Red Squill glycoside.
071004 .....	Cube Resins other than rotenone.
071501 .....	Ryania speciosa, powdered stems of.
072602 <sup>2</sup> .....	Silica gel.
072605 <sup>2</sup> .....	Silicon dioxide.
079014 .....	Turkey red oil.
079021 .....	Potassium salts of fatty acids.
079029 .....	Fatty alcohols (52–61% C10, 39–46% C8, 0–3% C6, 0–3% C12).

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Shaughnessey code	Chemical name <sup>1</sup>
079034 .....	Methyl esters of fatty acids (100% C8–C12)
079059 .....	Fatty alcohols (54.5% C10, 45.1% C8, 0.4% C6)
086803 .....	Xylene range aromatic solvent
107302 .....	Polyhedral inclusion bodies of Douglas fir tussock moth nucl.
107303 .....	Polyhedral inclusion bodies of gypsy moth nucleopolyhedrosis.
107304 .....	Polyhedral inclusion bodies of n. sertifer
116902 .....	Gibberellin A4 mixt. with Gibberellin A7.
117001 .....	Nosema locustae.
128888 .....	Lactofen (ANSI).
128934 <sup>2</sup> .....	Nitrogen, liquid.
129029 .....	Bergamot Oil.
224600 .....	Diethanolamides of the fatty acids of coconut oil (coded 079).
505200 .....	Isoparaffinic hydrocarbons.

<sup>1</sup>Shaughnessey codes and chemical names are taken directly from the FATES database. Several chemical names are truncated because the chemical names listed in the FATES database are limited to 60 characters.

<sup>2</sup>EPA does not believe this PAI will persist in sanitary streams long enough to reach a POTW.

[61 FR 57554, Nov. 6, 1996]

**TABLE 10 TO PART 455—LIST OF APPROPRIATE POLLUTION CONTROL TECHNOLOGIES**

This table contains those pollutant control technologies, such as hydrolysis, chemical oxidation, precipitation and activated carbon adsorption, which have been used for estimating compliance costs on a PAI specific basis. In general, these treatment technologies have been determined to be effective in treating pesticide containing wastewaters in literature, in bench or pilot scale treatability studies or in the Pesticide Manufacturing effluent guidelines. These are the same technologies that are presented as part of the Universal Treatment System. However, these technologies are PAI specific and may need to be used in conjunction with one another to provide treatment for all PAIs used at a facility over a period of time. In addition, facilities may experience difficulties treating wastewaters that contain emulsions, therefore, “appropriate” treatment for emulsified wastewaters must include an emulsion breaking step. For PAIs whose technology is listed as “Pollution Prevention”, the permitting authority/control authority can determine if additional treatment is necessary through best professional judgement/best engineering judgement, respectively.